Ergonomic Recommendations for the Air Force Officer Promotion Selection Process

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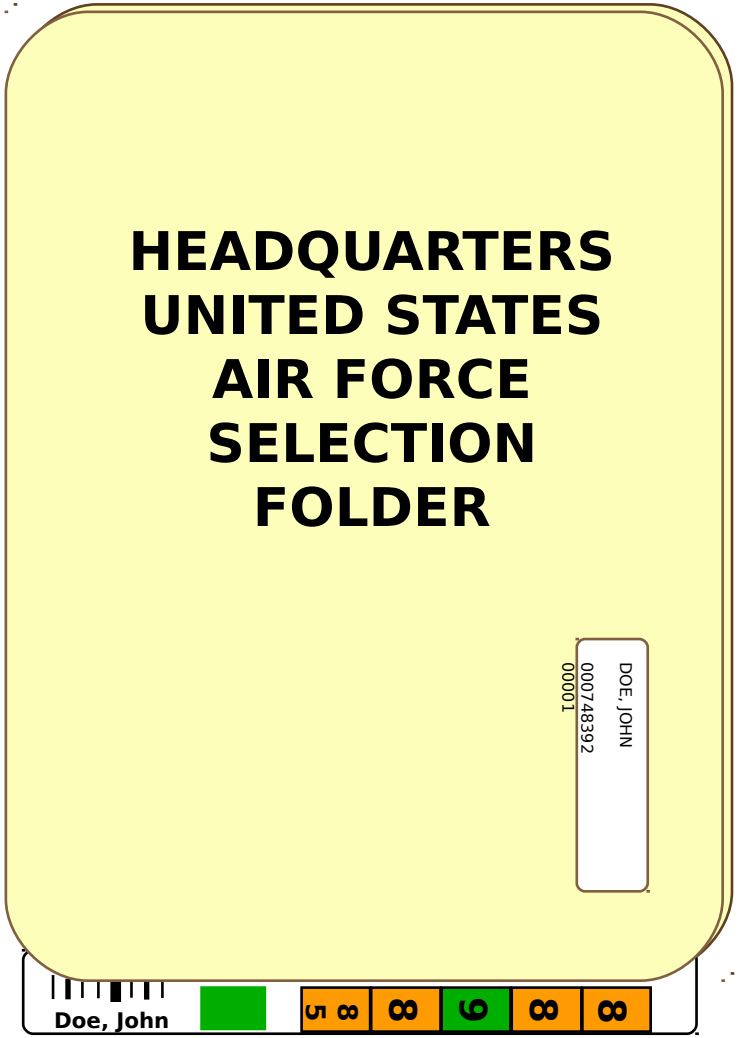
Purpose

- **Identify possible ergonomic improvements to the current Air Force Officer Selection system**
- **Collect background data to support the development of requirements to enhance the AFPC Automated Board Support system**

Air Force Selection Board

- **Convened to consider eligible officers for promotion to the next higher rank**
- **Comprised of five or more officers, senior in grade to the officers being considered for promotion**
- **Purpose – review and score officer promotion potential based on Air Force Officer Selection**


HEADQUARTERS
UNITED STATES
AIR FORCE
SELECTION
FOLDER
DOE, JOHN
000748392
00001
Doe, John
5 8
8
9
8
8

LEFT SIDE

PROMOTION RECOMMENDATION FORM (PRF)

PERFORMANCE / EFFECTIVENESS / TRAINING REPORTS

AF FORM 77

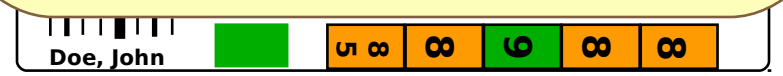
RIGHT SIDE

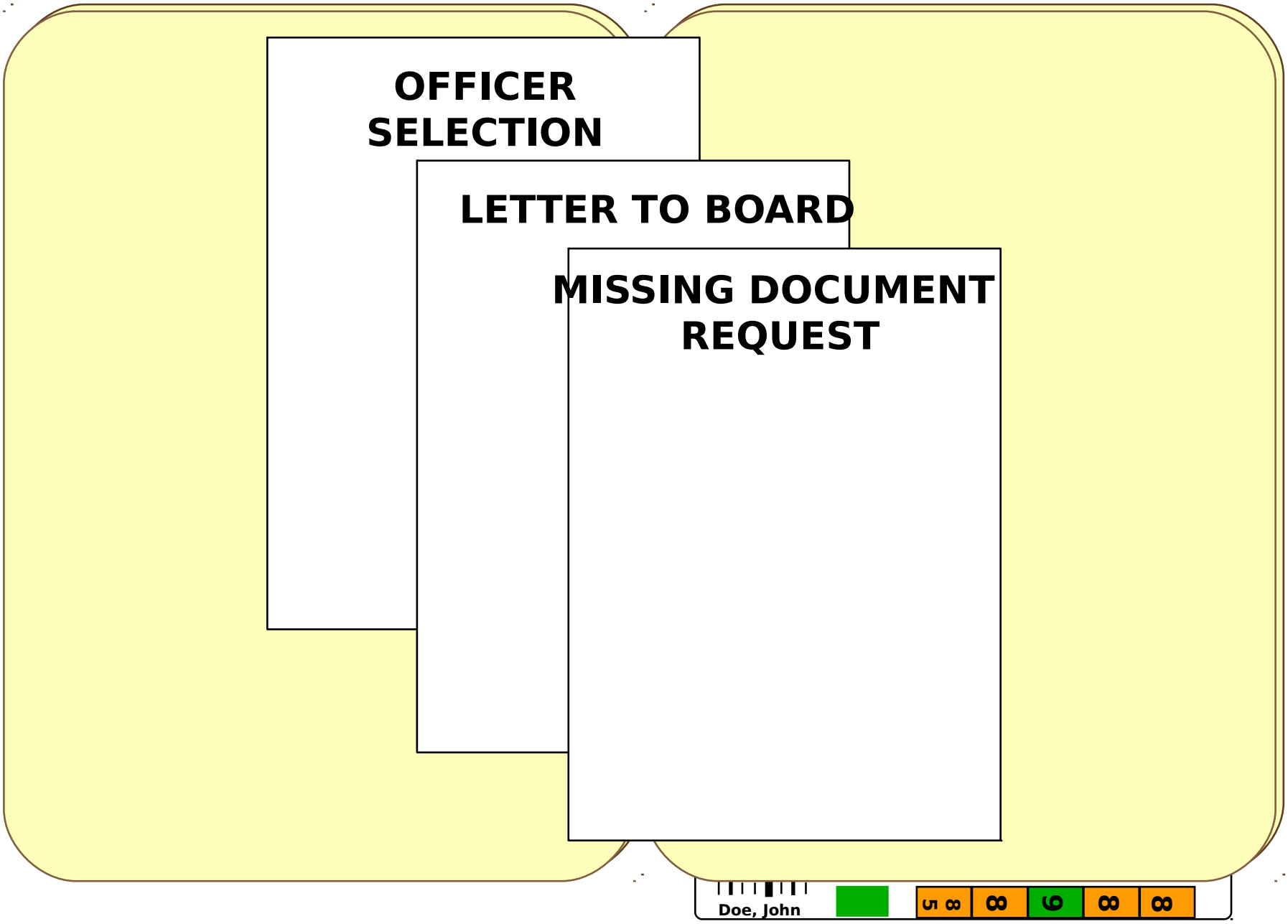
COURT- MARTIAL / ARTICLE 15 / LETTER OF REPRIMAND

BOARD CERTIFICATION

(NC only)

CITATIONS FOR DECORATIONS




OFFICER SELECTION
LETTER TO BOARD
MISSING DOCUMENT REQUEST
Doe, John

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Board Selection Room

Integrity - Service - Excellence

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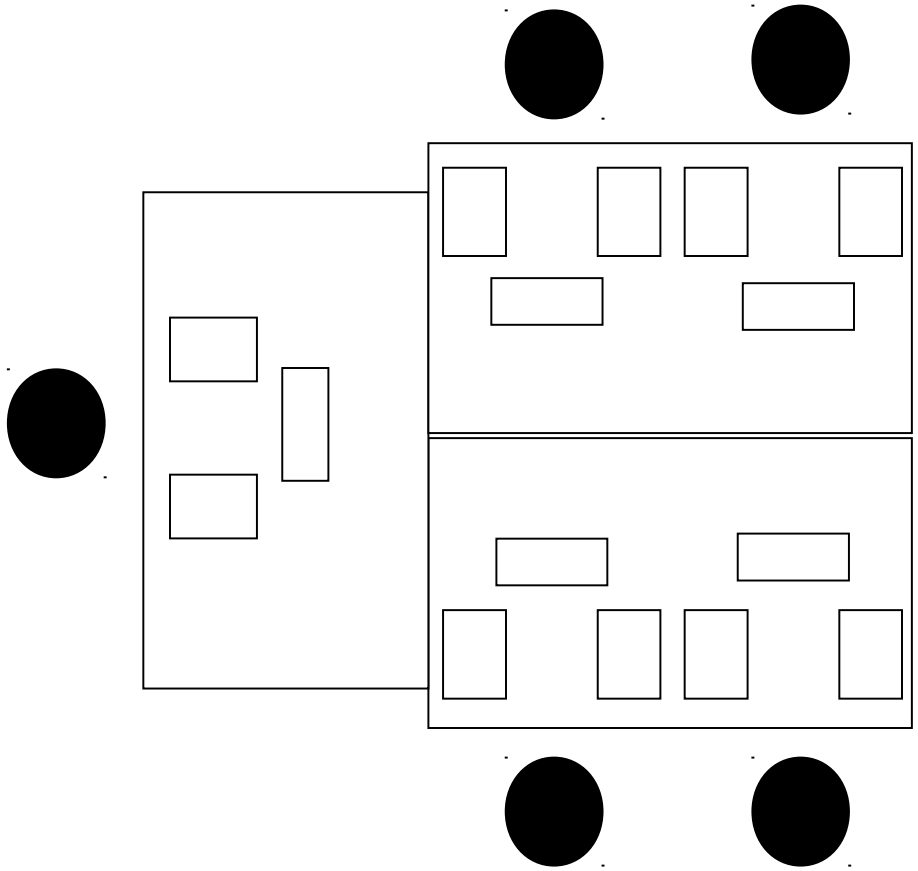
Panel Seating Arrangement



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Selection Board Procedures

- Review Officer Selection records
- Assign initial score to each officer
- Resolve splits/reexamine records in gray area (if necessary)

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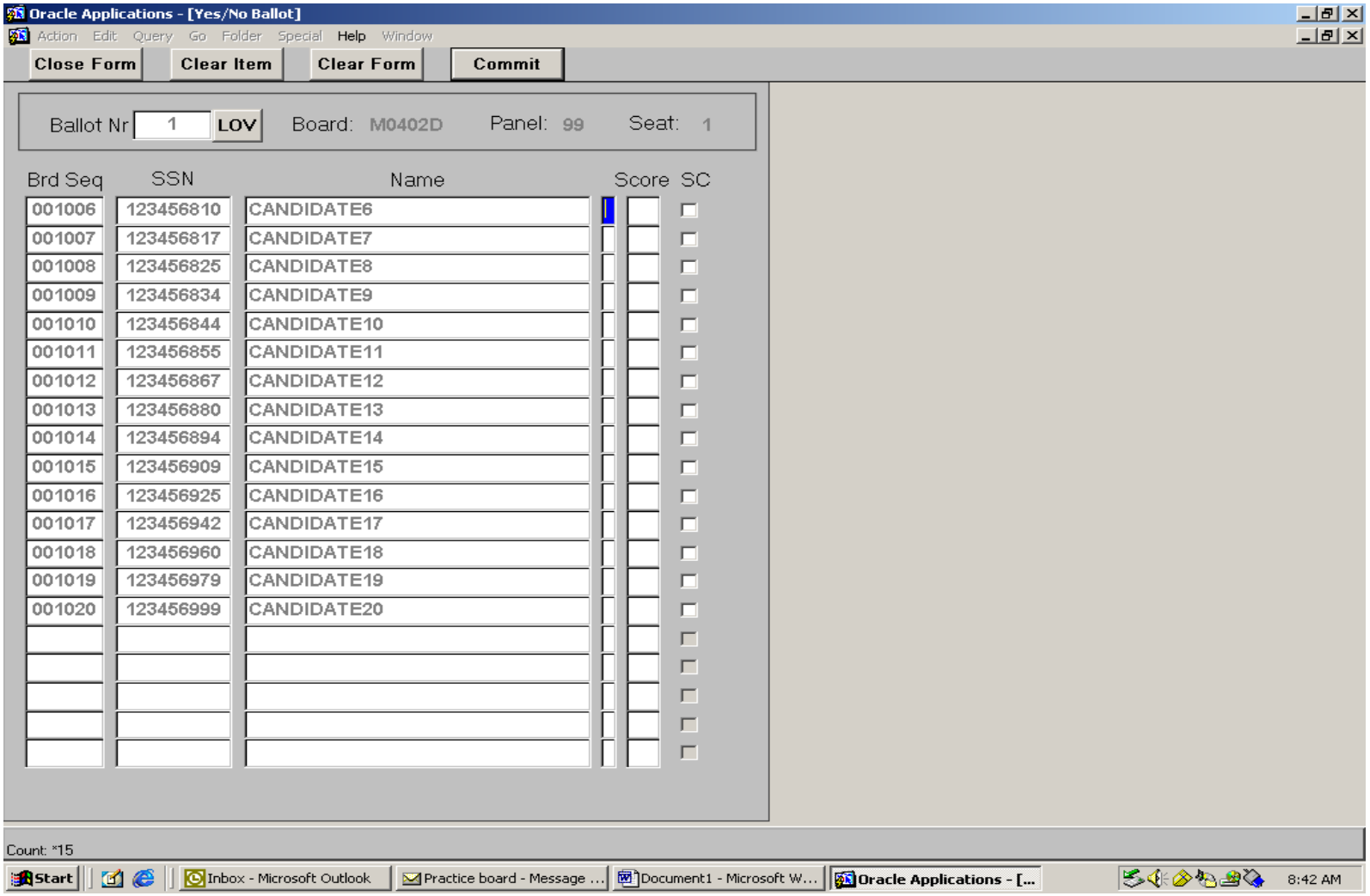
Automated Board Support System



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Scoring Menu

▪ Absolutely Superior	10	
▪ Outstanding	9.5	*Outstanding*
▪ Few Could Be Better	9	
▪ Strong	8.5	*Above Average*
▪ Slightly Above Average	8	
▪ Average	7.5	*Average*
▪ Slightly Below Average	7	
▪ Well Below Average	6.5	*Below Average*
▪ Lowest	6	

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Survey Procedure

- Process used to review and score officer selection records observed during the CY03A Maj Selection Board, convened May 5-16, 2003
- The time required to review and score individual officer selection records was measured and recorded at random
- At conclusion of board, panel members were asked to complete a brief survey about the Automated Board Support System

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Results

Record Inspection Time/Procedure

- **Most time (75-80%) used to review materials in the record, especially comments written on the back of officer performance reports**
- **Not all panelists reviewed record components in the same order**
  - Some also took notes on separate pad of paper

Results
Work Posture

- **Raters assumed a wide variety of seated postures while reviewing officer selection records**
- **Most panelists failed to take advantage of adjustable chair features**
- **Work space constraints appeared to affect posture**

Results

Board Member Comments/Concerns

- **Board member response to the electronic balloting system was overwhelmingly positive**
  - Overall satisfaction with the Automated Board Support system = 4.4 (on scale of 1-5)
  - Use of the automated scoring system (over paper and pencil) preferred by 41 of 45 board members
  - A few raters expressed concern that system allowed raters to assign a score to the wrong record

Results

Board Member Complaints/Concerns

- **Ergonomic comfort (average rating = 3.7) and desk space (average rating = 3.5) were the features that received the lowest ratings**
  - Some board members complained that the placement of the computer screens on the table caused neck pain and eyestrain

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Electronic Record Review
Potential Benefits

- **Eliminates the need to store and manage large volumes of paper records**
- **Hastens AFPC's ability to update officer selection record contents**
- **Permits panel members to have immediate and simultaneous access to all officer selection records**

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Electronic Record Review
Usability Considerations

Usability - extent to which a product can be used to achieve goals with effectiveness, efficiency and satisfaction, in a specified context of use (ISO/FDIS 9241-11)

- **New system must be readily usable by relatively inexperienced computer users with only minimal training**
- **New system must not slow the process of record review**

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Recommendations
Workstation Design

Provide well-designed computer workstations

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Recommendations
Workstation Design

Consider Tablet PCs

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Recommendations
Workstation Design

- **Train panel members in the use of adjustable chairs**
- **Remind panel members of the importance of changing postures and taking short rest breaks**

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Recommendations
Software Design

- **Modify current ballot to reduce/eliminate the risk of scoring errors**
- **Ensure that panel members are prevented from assigning a score to any record other than the record currently under review (For future systems that allow panelists to review records on-screen)**

Recommendations
Software Design

Consider implementing a graphical user interfa

- ✓ **Take existing knowledge of the intended users and their capabilities into account in the design (e.g., screen layout, graphical representations of objects and forms)**
- ✓ **Make application flexible to accommodate a variety of user needs depending on their skills and capabilities**
- ✓ **Permit users to control the application efficiently**
- ✓ **Ensure each user action is followed by adequate feedback**
- ✓ **Allow users to easily reverse their actions**